

Watt's Happening? #139

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We test drive the Tesla Model 3



There was a line-up at the solar EV charger at Peace Energy Co-op headquarters in Dawson Creek last week. At left is Ernie Freeman of Fort St. John with his Nissan Leaf, and at right Teresa and Peter vonTiesenhausen of Demmitt, Alberta with their new Tesla Model 3. The Peace Energy EV charger is connected to our 5 kW solar array, so these lucky drivers, or any other EV driver who would care to drop by, can charge up their vehicles with free solar electrons, compliments of the Co-op.

Paris is banning automobiles. Several European countries will have no internal combustion engines in ten years or fewer. Every major automotive manufacturer is rushing to release dozens of new electric vehicle models, some 22 new ones scheduled for next year alone, both cars and trucks. **Wow! Watt's Happening?**

THE FUTURE IS NOW

"It's like stepping into the future," explains Peter and Teresa vonTiesenhausen, of Demmitt, Alberta, as they take me for a test drive in their new Tesla Model 3 all-electric sedan.

The interior is luxurious with seating for five, and the dashboard is strangely free of dials, buttons and lights. In fact, there is

NOTHING on the dashboard except a lovely strip of polished wood.

Instead, all systems in the vehicle – temperature, sound, phone, navigation, state of charge, range – are controlled and monitored from one central touch screen.

"It was amazingly easy to adjust to," says Teresa. "Once you drive one of these, its clear it is a complete game changer."

What's it like to drive?

Very quiet, but extremely powerful. “We describe the acceleration as immediate and ludicrous. It’s zero to sixty in something like three seconds. Punch it at 110 and it’s the same. You’re at 150 instantly.

“When you’re driving this car you have a new sense of confidence,” says Peter, “because you realize you have the fastest, highest performance and safest car on the road.”

The battery is built into the bottom of the vehicle, creating a low centre of gravity, so it hugs the road. Powerful electric motors both front and back provide all-wheel drive.

COST?

About the same as a new 4-wheel drive pick up truck. But instead of costing more than \$5000 a year for fuel and repairs (plus it’s own weight in carbon pollution every few months), the all-electric Tesla will cost just a few hundred dollars a year for electricity with almost zero maintenance and totally zero pollution.

“To maintain the warranty, we only have to take it into the dealer (in Calgary) once every four years! Windshield washer fluid is about all you have to put in it.”

Brakes last a ridiculously long time because of “regenerative braking” – when you take your foot off the accelerator, the vehicle automatically uses the energy of slowing down to charge the battery, essentially turning the energy of breaking into free fuel.

RANGE ANXIETY

Will I run out of juice before I get to the next charging station? The Tesla touch screen navigation system is always on, and shows you where all the nearby charging stations are, and tells you when and where to find the best charge. It takes care of you.

The Tesla Model 3 has a 500 km range (which drops by up to 30 percent in the dead of winter).

But remember, with an EV (electric vehicle) you essentially have a gas station at home and another at work. Most people plug their EV in when they get to work, and then again when they get home, so for most driving it’s always nearly full, even in the winter.

Long distance driving requires fast charging stations along the route. These are small, simple

gadgets that are quick and easy to install compared to say, a gas station. Ontario just dedicated \$20 million for some 20,000 fast-chargers across that province. Tesla is installing a chain of super-fast chargers (full charge in an hour, a nice top-up in a few minutes) along the full length of the trans-Canada highway. In China and the Netherlands EV chargers are everywhere, and range anxiety is history.

THE SOLAR EV CONNECTION

Peter and Teresa have taken the next step into the future as well. They have installed a 10-kilowatt solar array that not only powers their home but also “fuels” their Model 3 with sunlight. It takes about 3 to 4 kilowatts of solar in the quite sunny Peace Region to run an EV year around. At that rate, it will pay for itself in 3 or 4 years in reduced fuel costs. Then it’s free fuel for life!

Almost no cost for fuel or repairs, no pollution, all in a luxury ultra-high-performance, super-safe vehicle that runs on sunlight. Sounds pretty futuristic. But it’s right here, right now.



*Filling your car up with sunlight.
The future has arrived!*